

### **Amendments to the Claims**

This listing of claims will replace all prior versions, and listing, of claims in the application.

#### **Listing of Claims:**

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Canceled)
8. (Canceled)
9. (Canceled)
10. (Canceled)
11. (Canceled)
12. (Canceled)
13. (Canceled)
14. (Canceled)
15. (Canceled)
16. (Canceled)
17. (Currently Amended) The optical pickup apparatus as set forth in ~~Claim 11~~ claim 31, wherein, in case said optical recording medium has a plurality of said information recording layers, said focal point dislocation detecting means detects the focal point dislocation in said respective information recording layers.

18. (Currently Amended) The optical pickup apparatus as set forth in ~~Claim 11~~ claim 34, comprising;

focal point dislocation compensating means for compensating the focal point dislocation of said converging optical system in accordance with a result of the detection carried out by said focal point dislocation detecting means; and

spherical aberration compensating means for compensating spherical aberration, which has been generated in said converging optical system, in accordance with a result of the detection carried out by said spherical aberration detecting means,

wherein said spherical aberration compensating means compensates the spherical aberration of said converging optical system, whose focal point dislocation has been compensated by said focal point dislocation compensating means.

19. (Currently Amended) The optical pickup apparatus as set forth in ~~Claim 12~~ claim 31, wherein said ~~light beam~~ separating means is a hologram.

20. (Currently Amended) The optical pickup apparatus as set forth in ~~Claim 10~~ claim 31, wherein:

the converging optical system includes an objective lens for converging a light beam emitted from said light source onto an optical recording medium,

the optical pickup apparatus comprising:

(a) a light beam separating means having a region divided by a straight line parallel with a radial direction, the region separating, out of the light beams passing through said converging optical system, a light beam of a 70% region of a light beam effective diameter, regulated by a numerical aperture of said objective lens, and

(b) a first signal generation means for generating a first focus error signal in accordance with the light beam separated by said light beam separating means,

the first focus error signal indicating focus point dislocation of said converging optical system.

21. (CURRENTLY AMENDED) The optical pickup apparatus as set forth in ~~Claim 20~~ claim 20, wherein said light beam separating means is a hologram.

22. (Currently Amended) The optical pickup apparatus as set forth in ~~Claim 12~~ claim 31, wherein:

the light beam separating means includes regions divided by a first straight line and a second straight line, the first straight line making a right angle with the optical axis, and the second straight line making a right angle with the straight line and a radial direction; and

a tracking error signal of the converging optical system is detected in accordance with the light beam separated by the regions of the light beam separating means.

23. (Currently Amended) The optical pickup apparatus as set forth in ~~Claim 22~~ claim 22, wherein said light beam separating means is a hologram.

24. (Canceled)

25. (New) A focal point dislocation detection method, comprising the steps of:  
dividing a light beam reflected from an information recording layer of an optical recording medium and passing through a converging optical system including an objective lens into three sections by means of a first circle or arc, around an optical axis of the light beam, having a diameter equal to or greater than a light beam effective diameter, a second circle or arc having a diameter smaller than that of the first circle or arc, but greater than 70% of the light beam effective diameter, and a third circle or arc having a diameter smaller than 70% of the light beam effective diameter,

a first section of the three sections being enclosed between the first circle or arc and the second circle or arc, a second section being enclosed between the second circle or arc and the third circle or arc, a third section being inside the third circle or arc,

the second section being divided into two sections, one of which where a diameter is greater than 70% of the light beam effective diameter is greater than the other where a diameter is smaller than 70% of the light beam effective diameter and

electrically converting a light beam separated by the second section into a first focal point error signal which is designated as a focal point dislocation signal representing a focal point dislocation in the converging optical system.

26. (New) The focal point dislocation detection method as set forth in claim 25, wherein:

the diameter of the second circle or arc is smaller than 85% of the light beam effective diameter; and

the diameter of the third circle or arc is greater than 60% of the light beam effective diameter.

27. (New) The focal point dislocation detection method as set forth in claim 26, wherein the focal point dislocation is detected based on a light beam of a section of a diameter 70% of the light beam effective diameter.

28. (New) The focal point dislocation detection method as set forth in claim 27, wherein:

a spherical aberration error signal SAES representing a spherical aberration in the converging optical system is obtainable from equations:

$$\text{SAES} = F1 - F2 \times K1 \text{ (K1 is a coefficient)}$$

$$\text{SAES} = F3 - F2 \times K2 \text{ (K2 is a coefficient)}$$

$$\text{SAES} = F3 - F1 \times K3 \text{ (K3 is a coefficient)}$$

where F1 is a second focal point error signal obtained by detecting a focal point dislocation of a light beam passing through the first section, F2 is the first focal point error signal obtained by detecting a focal point dislocation of a light beam passing through the second

section, and F3 is a third focal point error signal obtained by detecting a focal point dislocation of a light beam passing through the third section.

29. (New) The focal point dislocation detection method as set forth in claim 25, wherein the focal point dislocation is detected by a knife-edge method.

30. (New) The focal point dislocation detection method as set forth in claim 25, wherein the focal point dislocation is detected by a beam-size method.

31. (New) An optical pickup apparatus, comprising:  
a light source;  
a converging optical system including an objective lens converging, onto an optical recording medium, a light beam emitted from the light source;  
a light beam separating means having three sections defined by a first circle or arc around an optical axis of a light beam reflected from an information recording layer of the optical recording medium and passing through the converging optical system, the first circle or arc having a diameter equal to or greater than a light beam effective diameter, a second circle or arc having a diameter smaller than that of the first circle or arc, but greater than 70% of the light beam effective diameter, and a third circle or arc having a diameter smaller than 70% of the light beam effective diameter;

wherein a first section of the three sections is enclosed between the first circle or arc and the second circle or arc, a second section being enclosed between the second circle or arc and the third circle or arc, a third section being inside the third circle or arc;

wherein the second section is divided into two sections, one of which where a diameter is greater than 70% of the light beam effective diameter is greater than the other where a diameter is smaller than 70% of the light beam effective diameter;

a first signal generation means electrically converting a light beam separated by the second section into a first focal point error signal; and

a focal point dislocation detecting means designating the first focal point error signal as a focal point dislocation signal representing a focal point dislocation in the converging optical system.

32. (New) The optical pickup apparatus as set forth in claim 31, wherein:  
the diameter of the second circle or arc is smaller than 85% of the light beam effective diameter; and  
the diameter of the third circle or arc is greater than 60% of the light beam effective diameter.

33. (New) The optical pickup apparatus as set forth in claim 32, wherein  
the focal point dislocation detecting means detects a focal point dislocation based on a light beam of a section of a diameter 70% of the light beam effective diameter.

34. (New) The optical pickup apparatus as set forth in claim 33, further comprising:  
a second signal generation means detecting a focal point dislocation of a light beam passing through the first section of the light beam separating means to generate a second focal point dislocation signal;

third signal generation means detecting a focal point dislocation of a light beam passing through the third section of the light beam separating means to generate a third focal point dislocation signal; and

wherein there is provided spherical aberration detection means obtaining a spherical aberration error signal SAES representing a spherical aberration in the converging optical system from equations:

$$SAES = F1 - F2 \times K1 \text{ (K1 is a coefficient)}$$

$$SAES = F3 - F2 \times K2 \text{ (K2 is a coefficient)}$$

$$SAES = F3 - F1 \times K3 \text{ (K3 is a coefficient)}$$

where F1 is a second focal point error signal obtained by detecting a focal point dislocation of the light beam passing through the first section, F2 is the first focal point error signal obtained by detecting a focal point dislocation of a light beam passing through the second section, and F3 is a third focal point error signal obtained by detecting a focal point dislocation of the light beam passing through the third section.